CLAIM LISTING

Claim 1 (Currently Amended): A method for coating a medical device comprising:

providing a reactor having at least one partition that retains a bioactive agent in the reactor;

placing the medical device in the reactor;

contacting the medical device in the reactor with a solution including inorganic ions;

depositing inorganic ions on the medical device;

passing the solution including non-deposited inorganic ions through the at least one partition;

contacting the medical device in the reactor with a bioactive agent; and

retaining the bioactive agent in the reactor such that ~~depositing inorganic ions and a~~ the bioactive agent is deposited on the device ~~in a reactor, wherein inorganic ions are deposited from a stream of a coating solution passing through said reactor, which reactor is provided with at least one partition to retain the bioactive agent in the reactor~~.

Claim 2 (Currently Amended): A method according to claim 1 wherein said inorganic ions are selected ~~chosen~~ from the group consisting of calcium ions, magnesium ions, sodium ions, phosphate ions, carbonate ions, chloride ions and hydroxide ions.

Claim 3 (Currently Amended): A method according to claim 1, wherein said partition has a low permeability towards said bioactive agent and a high permeability towards said ~~the~~ coating solution.

Claim 4 (Original): A method according to claim 3, wherein said partition is a molecular weight cut-off membrane.

Claim 5 (Previously Presented): A method according to claim 1, wherein said medical device has been coated with an initial layer of inorganic material.

Claim 6 (Previously Presented): A method according to claim 1, wherein after coating the medical device, said medical device is contacted with an acidic aqueous solution to redissolve inorganic salts of the coating and to obtain a coating of bioactive agent.

Claim 7 (Currently Amended): A method according to claim 1, wherein said coating solution comprises one or more of 0.5 to 10 mM calcium ions, 0.5 to 6 mM phosphate ions, 0 to 1 mM magnesium ions, 0 to 0.5 mM sodium ions, 0 to 0.5 mM chloride ions, 0 to 5 mM carbonates and N-2-hydroxyethylpiperazine-N'-4-ethane sulfonic acid ~~HEPES~~ and/or tris(hydroxymethyl)aminomethane ~~Tris~~ in a total concentration between 0 and 100 mM.

Claim 8 (Previously Presented): A method according to claim 1, wherein the medical device is a metallic, organic, polymeric, or ceramic medical implant.

Claim 9 (Previously Presented): A method according to claim 1, wherein said bioactive agent is a peptide, a polypeptide, a protein or a combination thereof.

Claim 10 (Previously Presented): A method according to claim 1, wherein said bioactive agent is an antibiotic agent, a growth factor or growth hormone, a bone reinforcing protein, a cell adhesion factor, autologous serum, a vitamin or a combination of said compounds.

Claim 11 (Currently Amended): A method according to claim 9, wherein said bioactive agent is selected from the group consisting of tobramycin, vancomycin, albumin, casein, gelatin, lysosime, fibronectin, fibrin, chitosan, polylysine, polyalanine, polycysteine, Bone Morphogenetic Protein (BMP), Epidermal Growth Factor (EGF), Fibroblast Growth Factor (bFGF), Nerve Growth Factor (NGF), Bone Derived Growth Factor (BDGF), Transforming Growth Factor-β1 (TGF-β1), Transforming Growth Factor-β (TGF-β), the tri-peptide arginine-glycine-aspartic acid (RGD), vitamin D3, dexamethasone, and human Growth Hormone (hGH) or a combination of said compounds.

Claim 12 (Previously Presented): A method according to claim 1, wherein said bioactive agent is present in the reactor vessel in an initial concentration of 0.01 to 10,000 mg/l.

Claims 13-27 (Cancelled)